

Title (en)

SUBRESOLUTION SILICON FEATURES AND METHODS FOR FORMING THE SAME

Title (de)

SILIZIUM MIT SUBRESOLUTIONSEIGENSCHAFTEN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

DÉTAILS DE SILICIUM EN SOUS-RÉSOLUTION ET PROCÉDÉS DE FORMATION

Publication

EP 2041781 A1 20090401 (EN)

Application

EP 07810048 A 20070628

Priority

- US 2007015146 W 20070628
- US 48680006 A 20060714

Abstract (en)

[origin: WO2008008204A1] Novel etch techniques are provided for shaping silicon features below the photolithographic resolution limits. FinFET devices are defined by recessing oxide (102) and exposing a silicon protrusion (124) to an isotropic etch, at least in the channel region. In one implementation, the protrusion (124) is contoured by a dry isotropic etch having excellent selectivity, using a downstream microwave plasma etch.

IPC 8 full level

H01L 21/336 (2006.01); **H01L 29/786** (2006.01)

CPC (source: EP KR US)

H01L 29/66795 (2013.01 - EP KR US); **H01L 29/785** (2013.01 - KR); **H01L 29/7851** (2013.01 - EP KR US); **H01L 29/7853** (2013.01 - KR); **H01L 29/7854** (2013.01 - KR); **H10B 12/056** (2023.02 - KR); **H10B 12/31** (2023.02 - KR); **H10B 12/36** (2023.02 - KR); **H01L 29/7853** (2013.01 - EP US); **H01L 29/7854** (2013.01 - EP US); **H10B 12/056** (2023.02 - EP US); **H10B 12/31** (2023.02 - EP US); **H10B 12/36** (2023.02 - EP US)

Citation (search report)

See references of WO 2008008204A1

Designated contracting state (EPC)

DE GB IT

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2008008204 A1 20080117; CN 101490821 A 20090722; CN 101490821 B 20130123; EP 2041781 A1 20090401; JP 2009544150 A 20091210; JP 5391423 B2 20140115; KR 101403509 B1 20140609; KR 20090039783 A 20090422; US 2008014699 A1 20080117; US 2010148234 A1 20100617; US 2012061740 A1 20120315; US 7678648 B2 20100316; US 8084845 B2 20111227; US 8981444 B2 20150317

DOCDB simple family (application)

US 2007015146 W 20070628; CN 200780025866 A 20070628; EP 07810048 A 20070628; JP 2009519450 A 20070628; KR 20097003076 A 20070628; US 201113302090 A 20111122; US 48680006 A 20060714; US 71312510 A 20100225